

WHAT IS CLAIMED IS:

1. A method for aligning a light source to an integrating rod in a display system comprising:

providing a lamp and a lamp interface, the lamp  
5 interface having an alignment aperture disposed thereon;

aligning the lamp with respect to the lamp interface until a desired amount of light is focused on the alignment aperture;

after obtaining a desired lamp alignment, fixing the  
10 lamp to the lamp aperture to form an aligned lamp assembly; and

coupling the aligned lamp assembly to the integrating rod.

15 2. The method of Claim 1, wherein the alignment aperture is a sequential color recapture aperture.

3. The method of Claim 1, wherein the lamp interface is tapered and configured to attach to the  
20 integrating rod.

4. The method of Claim 1, wherein an interior surface of the lamp interface is reflective and operable to recycle light lost from the lamp.

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5. The method of Claim 1, wherein aligning the lamp with respect to the lamp interface comprises aligning the lamp with respect to the lamp interface in six axes.

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6. The method of Claim 5, wherein aligning the lamp with respect to the lamp interface comprises aligning by adjusting a plurality of six-axis joints.

5 7. The method of Claim 1, wherein the lamp is elliptical.

8. The method of Claim 1, wherein the alignment aperture is permanently affixed to the lamp interface.

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9. The method of Claim 1, wherein aligning the lamp with respect to the lamp interface comprises measuring the amount of light transmitted through the alignment aperture.

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10. The method of Claim 1, wherein coupling the aligned lamp assembly to the integrating rod comprises screwing the lamp interface into the integrating rod.

11. A sub-assembly for use in a display system comprising:

a lamp;

a lamp interface coupled to the lamp;

5 an alignment aperture disposed on the lamp interface; and

wherein the lamp is aligned with the lamp interface such that a point of focus of light from the lamp is the alignment aperture.

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12. The sub-assembly of Claim 11, wherein the lamp interface is coupled to the lamp by a plurality of six-axis joints.

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13. The sub-assembly of Claim 11, wherein the lamp is elliptical.

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14. The sub-assembly of Claim 11, wherein the lamp is parabolic and further comprising a lens for focusing light from the parabolic lamp.

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15. The sub-assembly of Claim 11, wherein the alignment aperture is a sequential color recapture aperture.

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16. The sub-assembly of Claim 11, wherein the lamp interface is tapered and configured to couple to an integrating rod.

17. The sub-assembly of Claim 11, wherein the lamp aperture is not coupled to an integrating rod.

18. A method for aligning a light source comprising:

providing a lamp and a lamp interface, the lamp interface having an alignment aperture disposed thereon;

5 aligning the lamp with respect to the lamp interface until a desired amount of light is focused on the alignment aperture; and

after obtaining a desired lamp alignment, fixing the lamp to the alignment aperture to form an aligned lamp  
10 assembly.

19. The method of Claim 18, wherein the lamp interface is configured to attach to an integrating rod.

15 20. The method of Claim 18, wherein aligning the lamp with respect to the lamp interface comprises aligning the lamp with respect to the lamp interface and six axes.